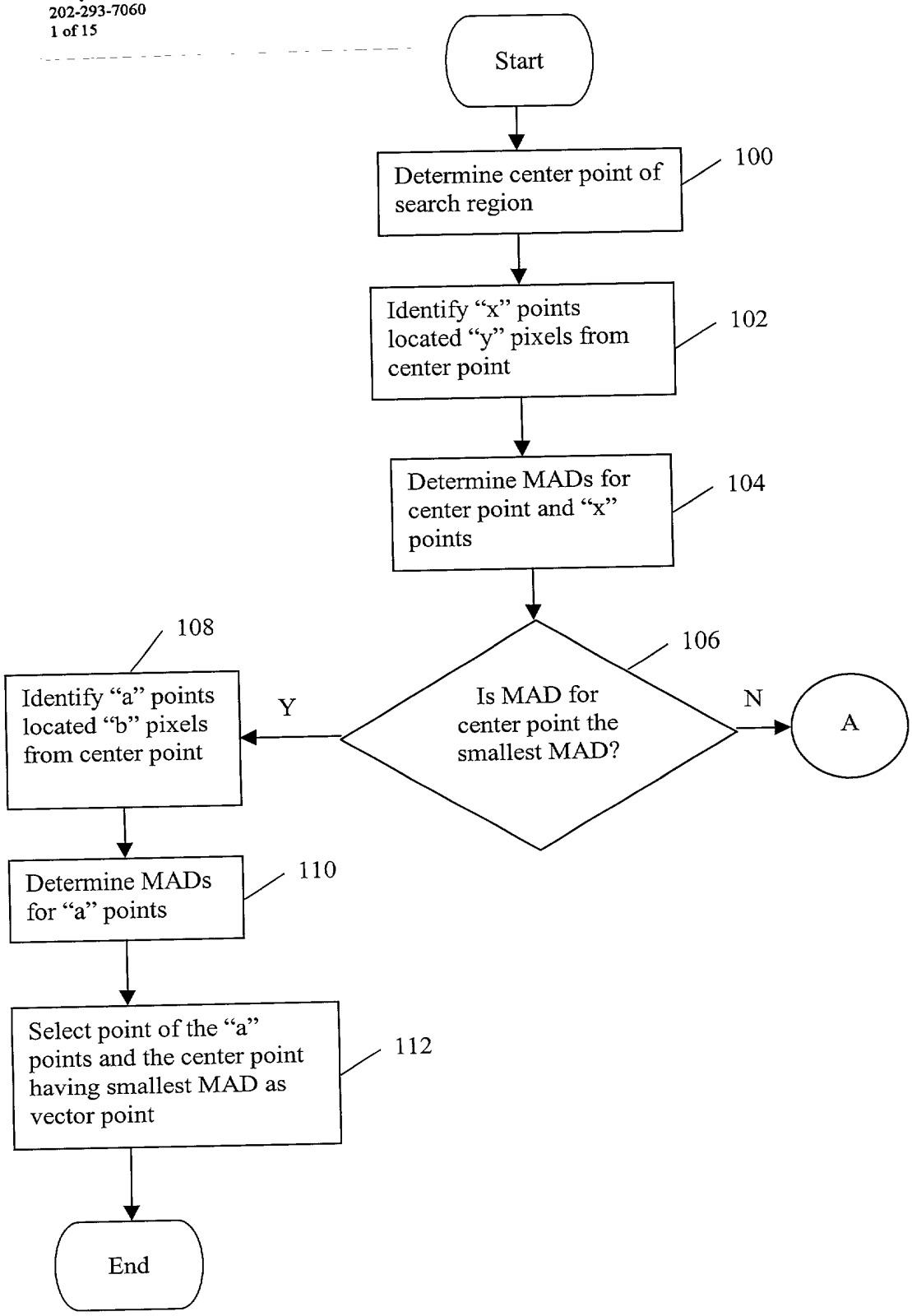

Start
Determine center point of search region
100
Identify "x" points located "y" pixels from center point
102
Determine MADs for center point and "x" points
104
Is MAD for center point the smallest MAD?
106
Y
N
A
108
Identify "a" points located "b" pixels from center point
Determine MADs for "a" points
110
Select point of the "a" points and the center point having smallest MAD as vector point
112
End

Fig. 1A

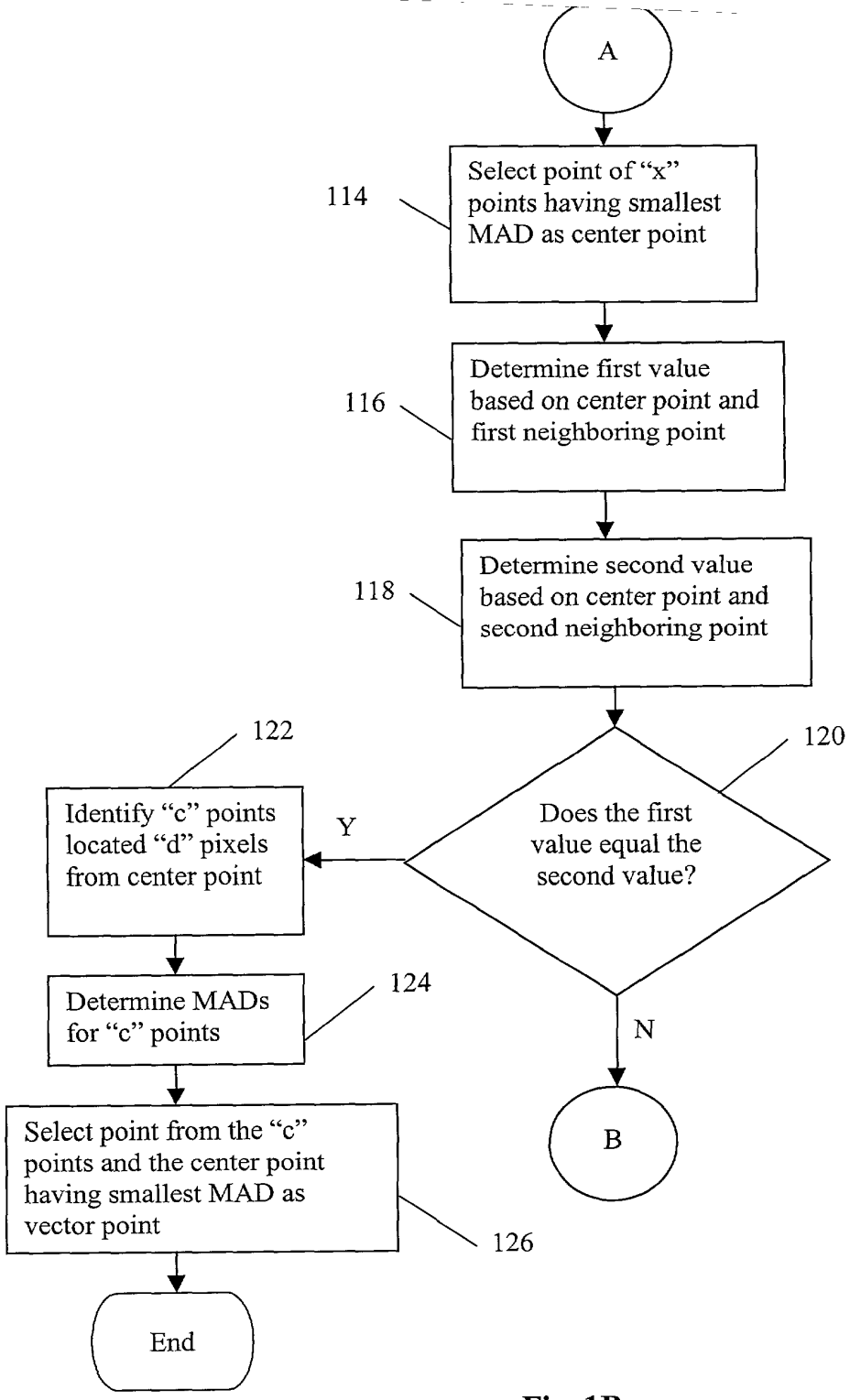

A
Select point of "x" points having smallest MAD as center point
114
Determine first value based on center point and first neighboring point
116
Determine second value based on center point and second neighboring point
118
Does the first value equal the second value?
120
Y
N
Identify "c" points located "d" pixels from center point
122
Determine MADs for "c" points
124
Select point from the "c" points and the center point having smallest MAD as vector point
126
B
End

Fig. 1B

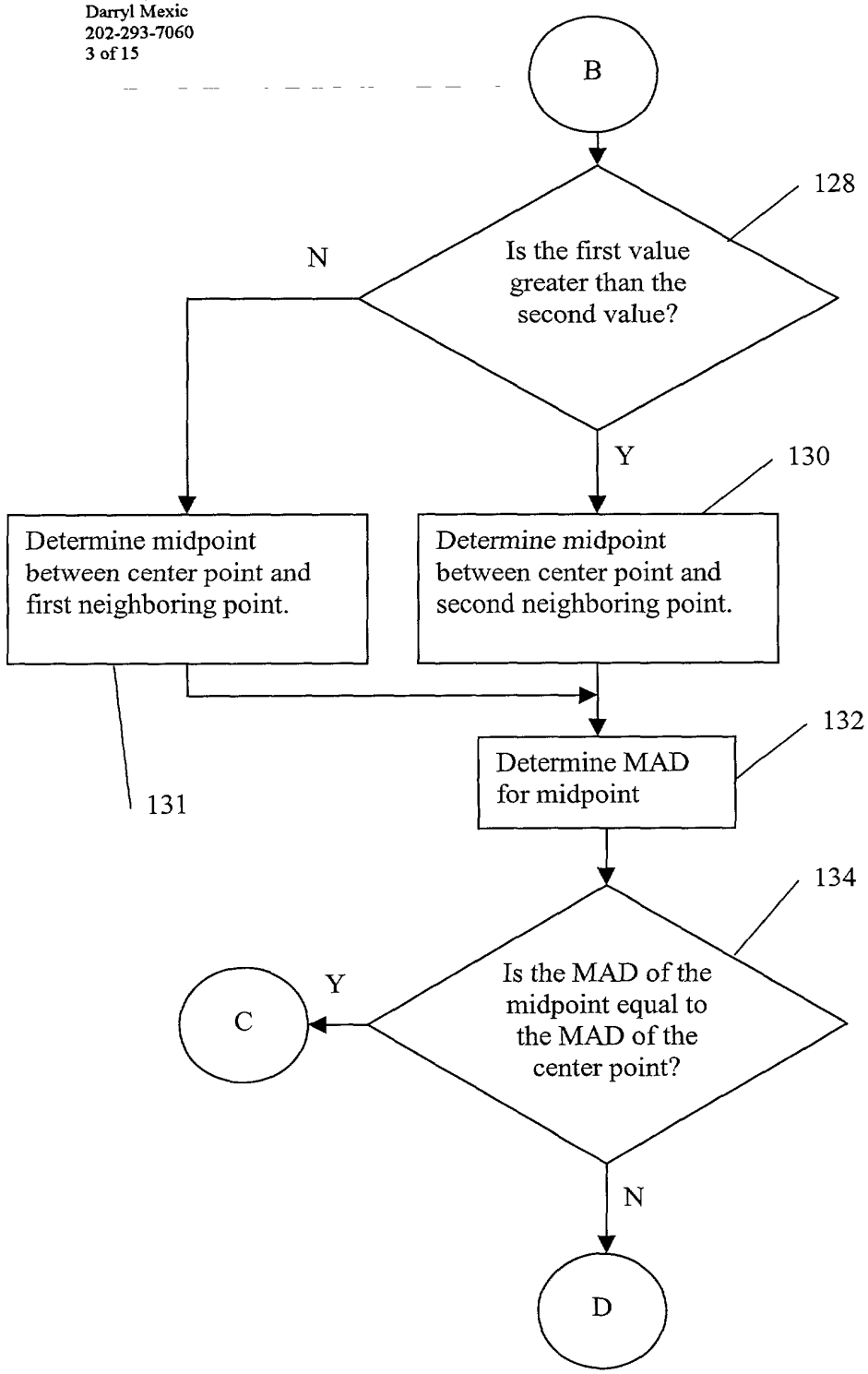

B
128
Is the first value greater than the second value?
N
Y
130
Determine midpoint between center point and first neighboring point.
Determine midpoint between center point and second neighboring point.
131
132
Determine MAD for midpoint
134
Is the MAD of the midpoint equal to the MAD of the center point?
Y
C
N
D

Fig. 1C

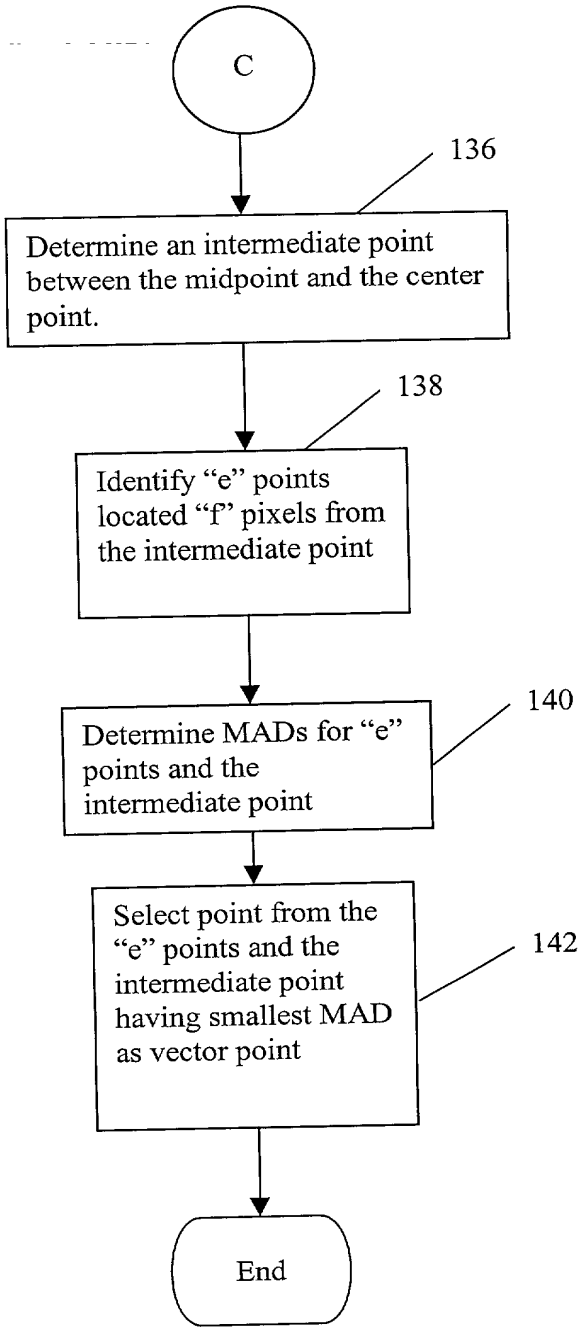

C
136
Determine an intermediate point between the midpoint and the center point.
138
Identify "e" points located "f" pixels from the intermediate point
140
Determine MADs for "e" points and the intermediate point
142
Select point from the "e" points and the intermediate point having smallest MAD as vector point
End

Fig. 1D

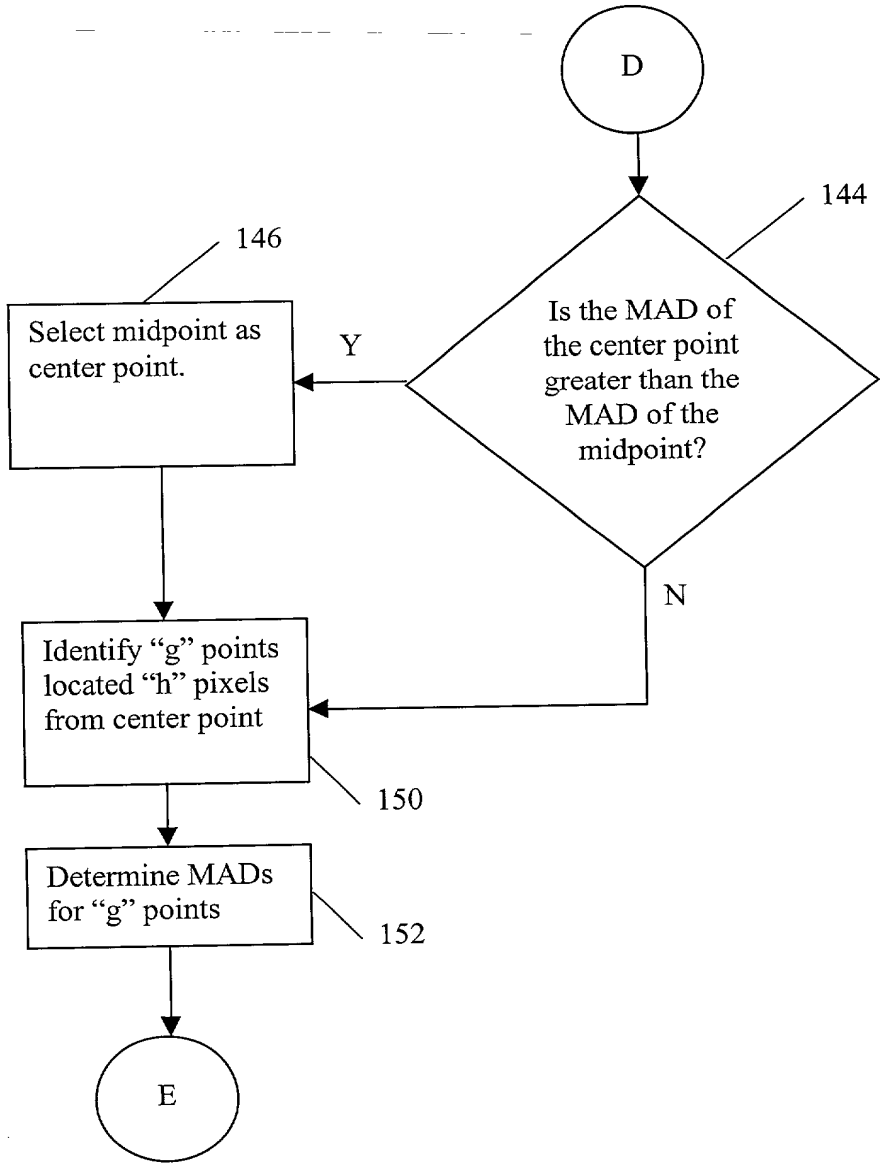

D
144
Is the MAD of the center point greater than the MAD of the midpoint?
Y
146
Select midpoint as center point.
N
Identify "g" points located "h" pixels from center point
150
Determine MADs for "g" points
152
E

Fig. 1E

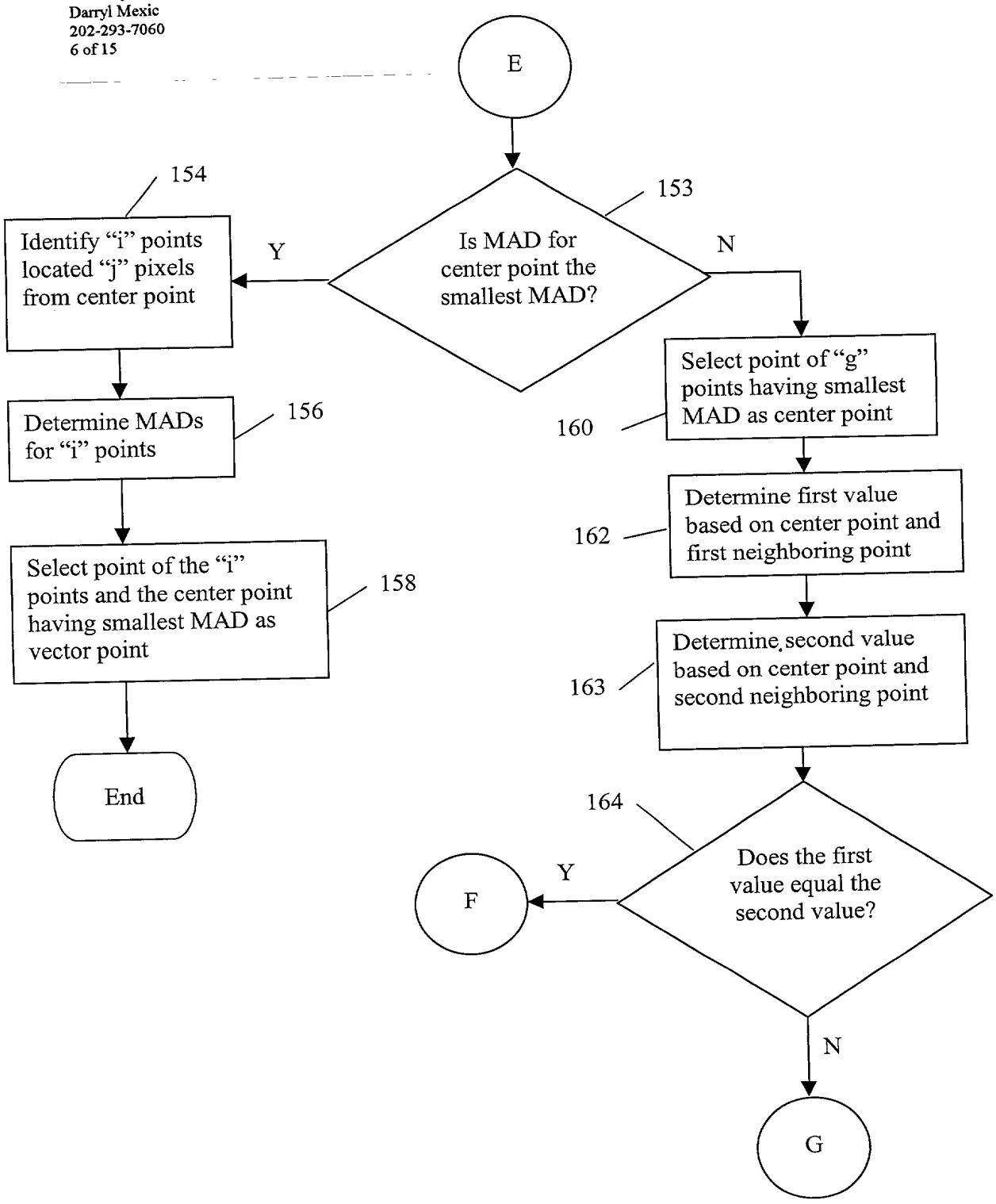

E
153
Is MAD for center point the smallest MAD?
Y
N
154
Identify "i" points located "j" pixels from center point
Determine MADs for "i" points
156
Select point of the "i" points and the center point having smallest MAD as vector point
158
End
Select point of "g" points having smallest MAD as center point
160
Determine first value based on center point and first neighboring point
162
Determine second value based on center point and second neighboring point
163
164
Does the first value equal the second value?
Y
F
N
G

Fig. 1F

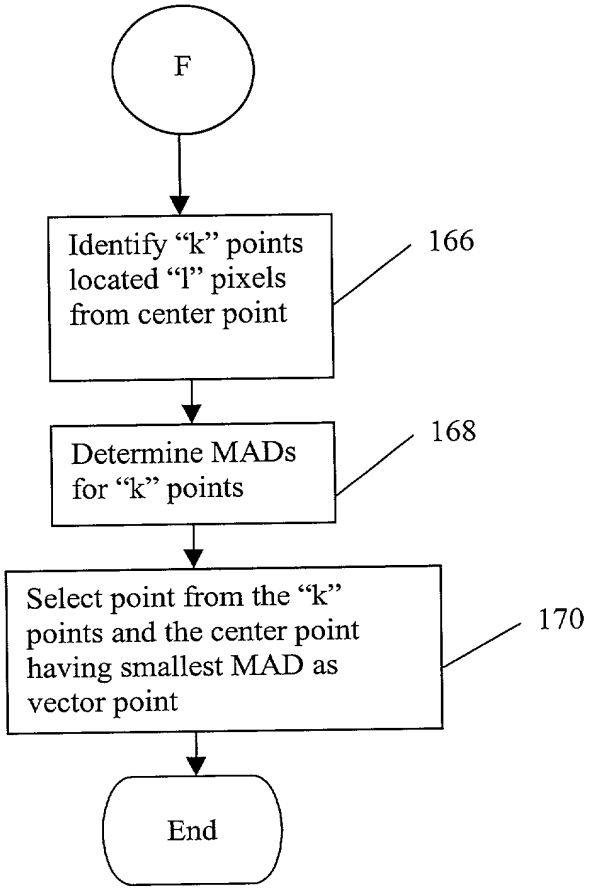

F
Identify "k" points located "l" pixels from center point
166
Determine MADs for "k" points
168
Select point from the "k" points and the center point having smallest MAD as vector point
170
End

Fig. 1G

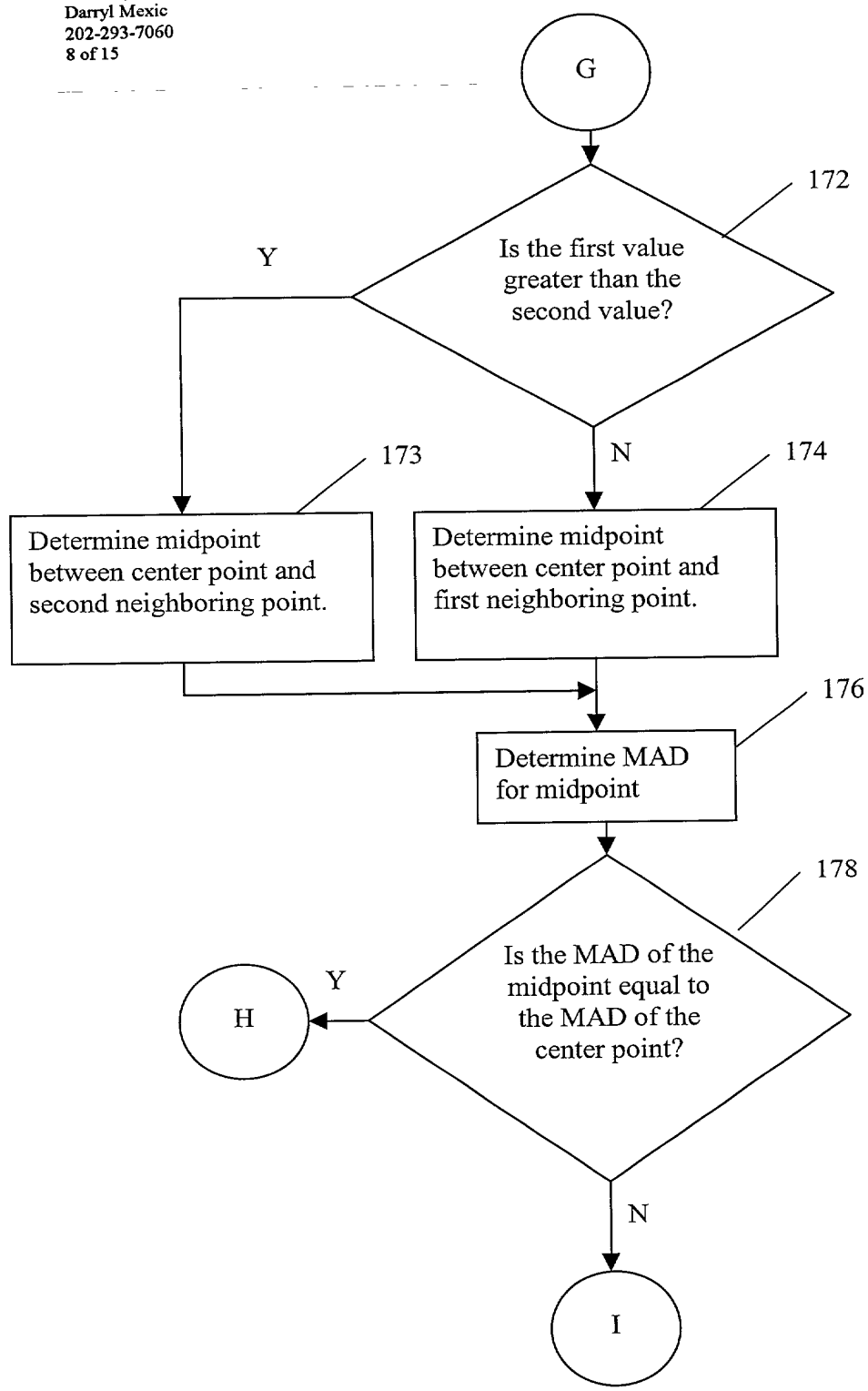

G
172
Is the first value greater than the second value?
Y
N
173
Determine midpoint between center point and second neighboring point.
174
Determine midpoint between center point and first neighboring point.
176
Determine MAD for midpoint
178
Is the MAD of the midpoint equal to the MAD of the center point?
Y
H
N
I

Fig. 1H

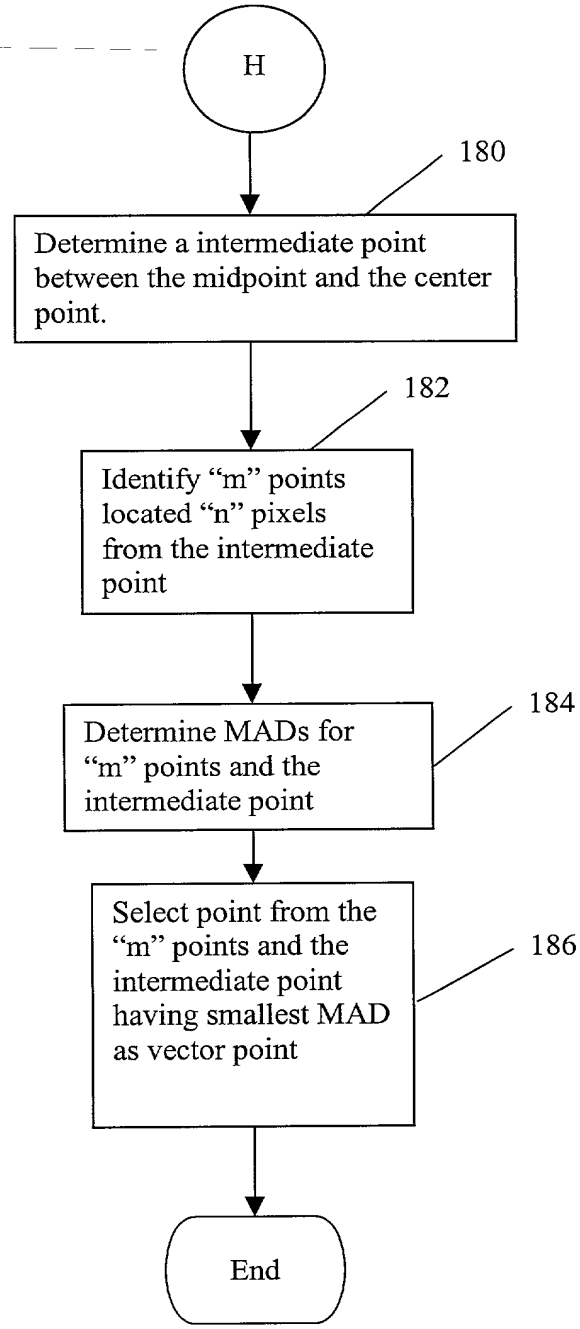

H
180
Determine a intermediate point between the midpoint and the center point.
182
Identify "m" points located "n" pixels from the intermediate point
184
Determine MADs for "m" points and the intermediate point
186
Select point from the "m" points and the intermediate point having smallest MAD as vector point
End

Fig. 1I

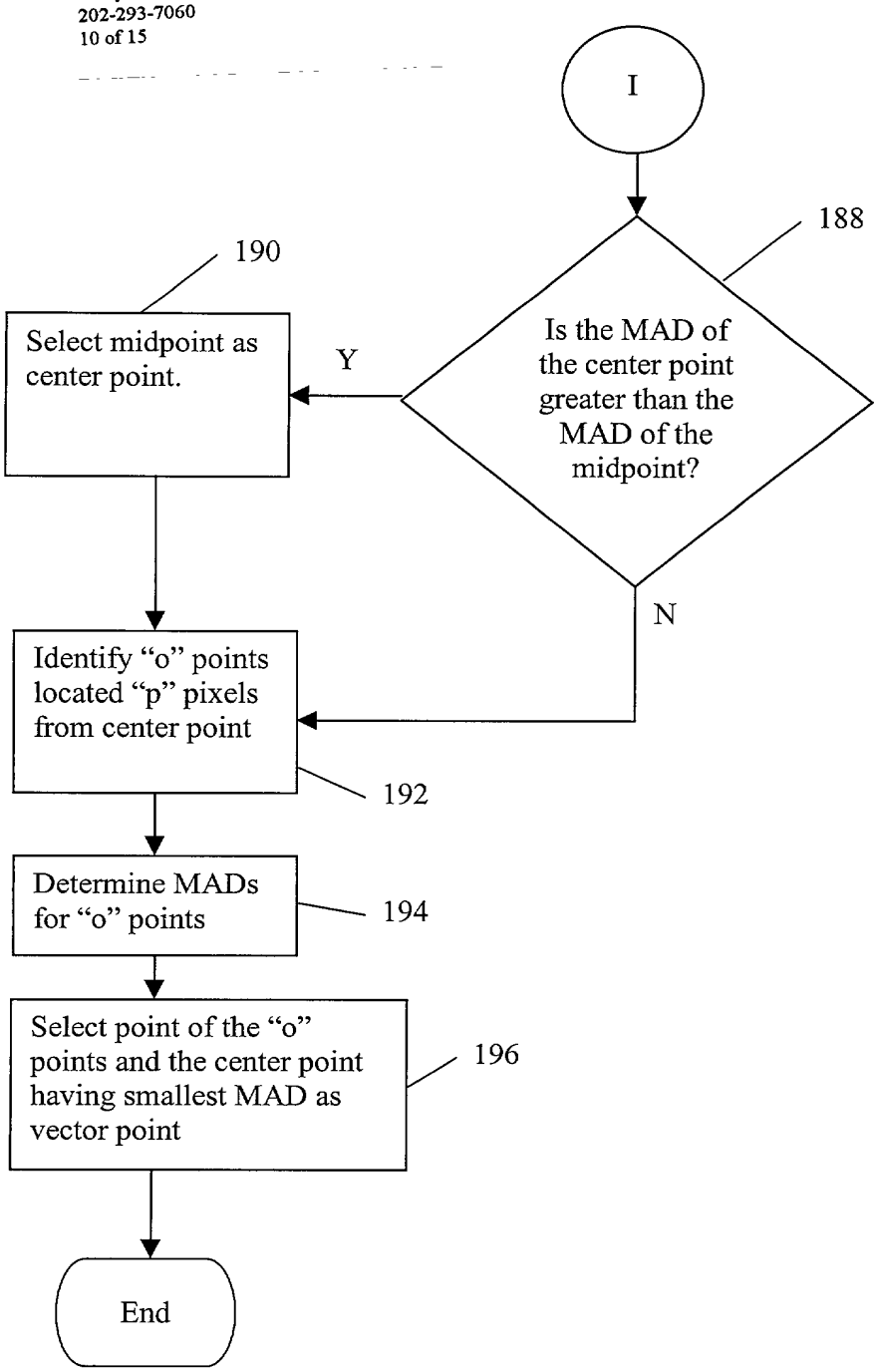

I
188
Is the MAD of the center point greater than the MAD of the midpoint?
Y
N
190
Select midpoint as center point.
Identify "o" points located "p" pixels from center point
192
Determine MADs for "o" points
194
Select point of the "o" points and the center point having smallest MAD as vector point
196
End

Fig. 1J

FIG. 2A

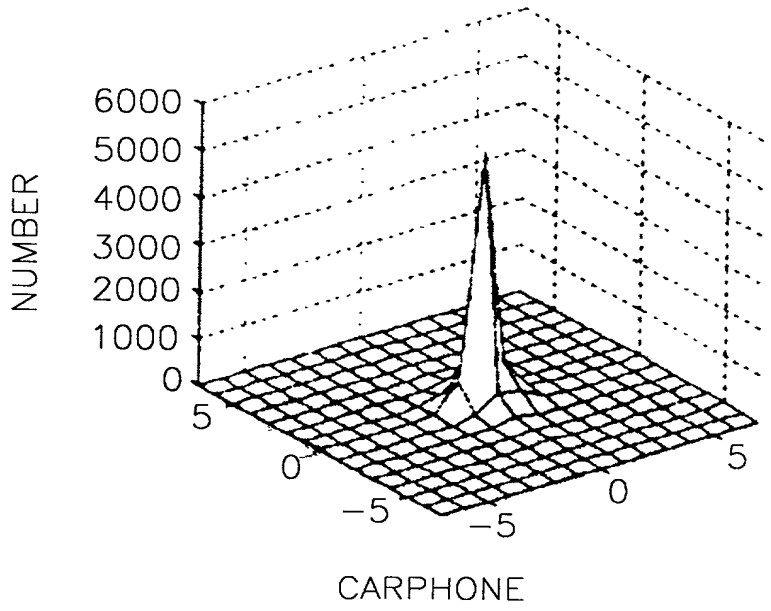
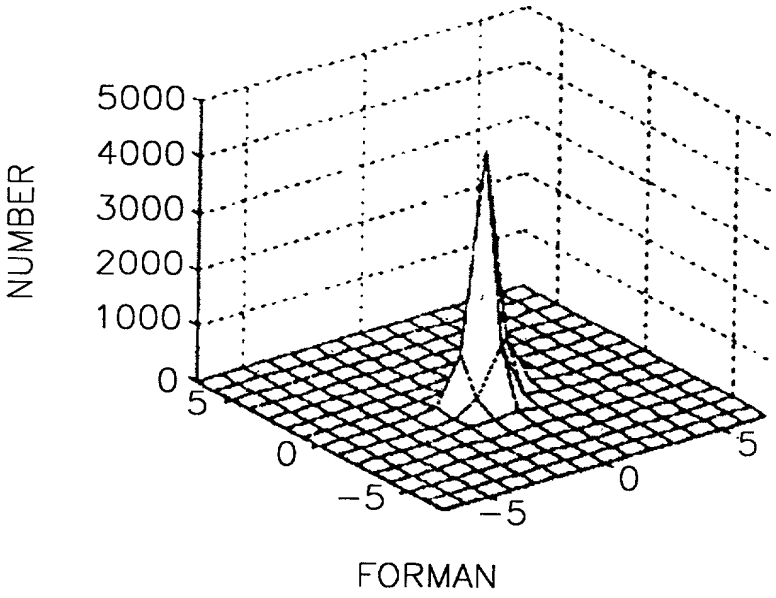

NUMBER
6000
5000
4000
3000
2000
1000
0
5
0
−5
−5
0
5
CARPHONE

FIG. 2B


NUMBER
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4000
3000
2000
1000
0
5
0
−5
−5
0
5
FORMAN

FIG. 2C

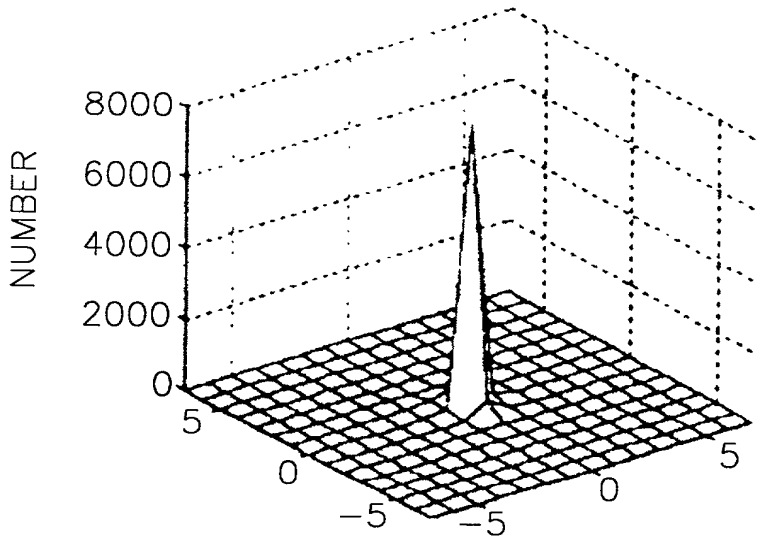
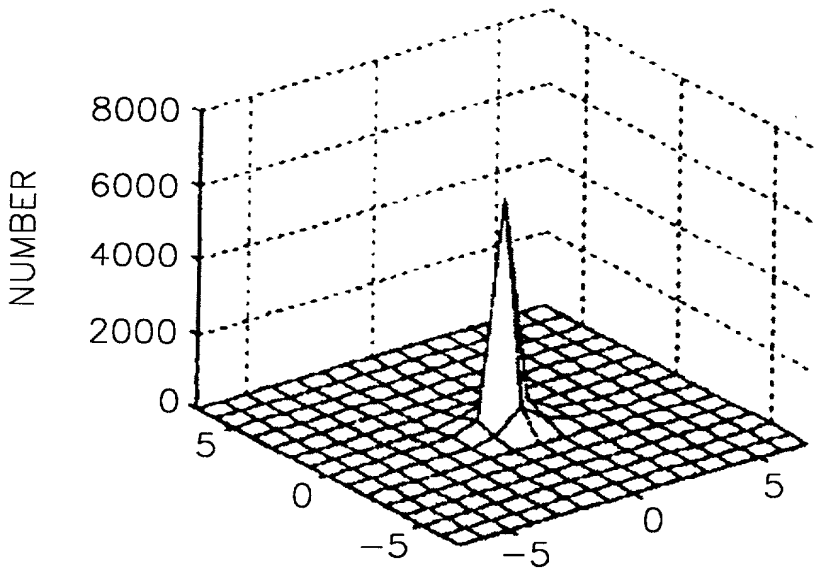

NUMBER
8000
6000
4000
2000
0
5
0
−5
−5
0
5
MOM & DOUGHTER

FIG. 2D


NUMBER
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6000
4000
2000
0
5
0
−5
−5
0
5
SUSIE

FIG. 3

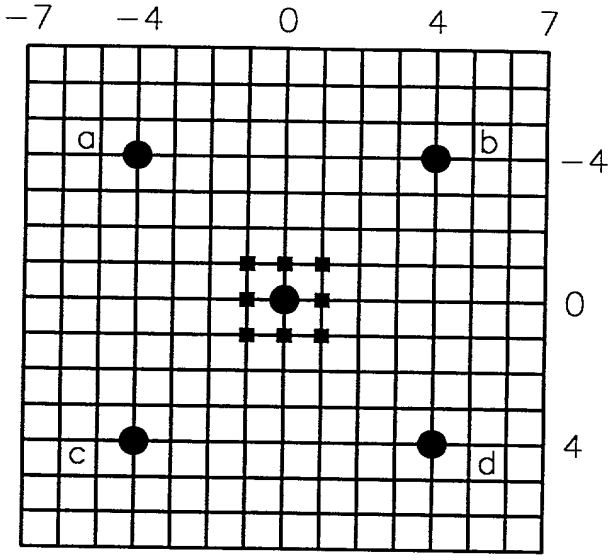


FIG. 4A

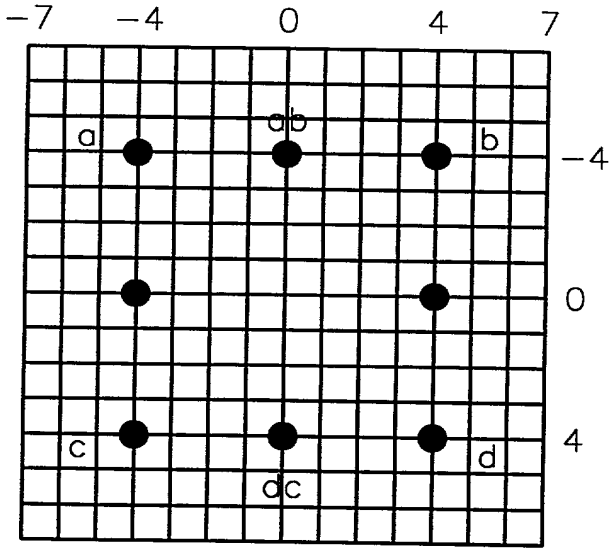
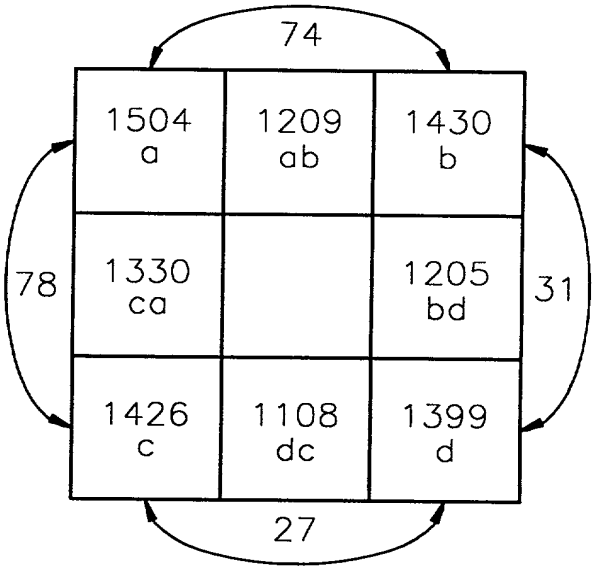
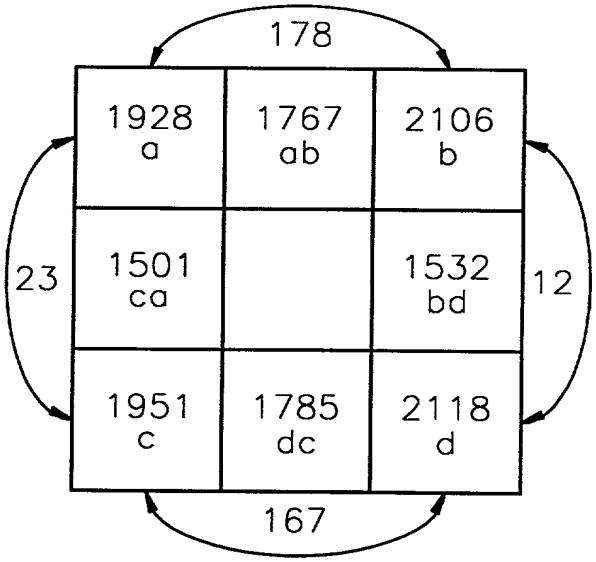


FIG. 4B



CARPHONE

FIG. 4C



MOM & DOUGHTER

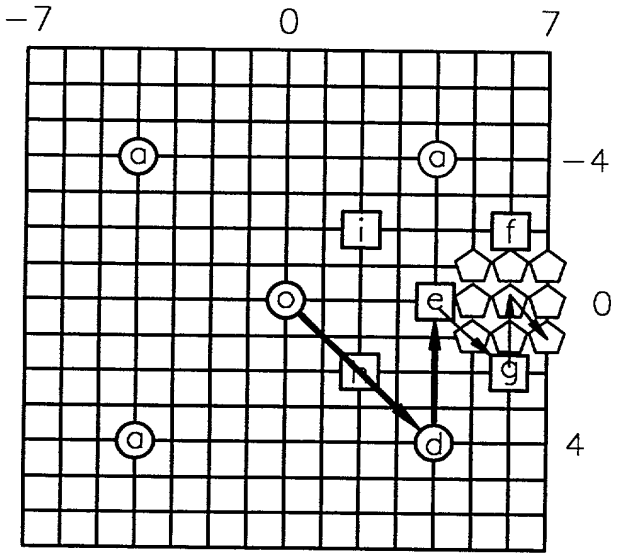



FIG. 5